

What is claimed is:

- 1 1. A semiconductor device comprising:
2 a plurality of first bump electrodes arranged on a main surface,
3 and each of said plurality of first bump receiving signals or
4 power;
5 a plurality of dummy bump electrodes arranged on said main
6 surface, and each of said plurality of dummy bump electrically
7 connected to associated one of said plurality of first bump
8 electrodes.
- 1 2. The semiconductor device as claimed in claim 1 further
2 comprising:
3 a plurality of protection circuit electrically coupled to
4 said plurality of first bump electrodes.
- 1 3. The semiconductor device as claimed in claim 1, further
2 comprising:
3 a plurality of test electrodes electrically connected to said
4 first bump electrodes.
- 1 4. The semiconductor device as claimed in claim 3, wherein
2 said plurality of test electrodes being arranged along four
3 edges of said semiconductor device.
- 1 5. The semiconductor device as claimed in claim 1, wherein said
2 plurality of dummy bump electrodes being higher than said
3 plurality of chip electrodes.
- 1 6. The semiconductor device as claimed in claim 1, wherein said

2 plurality of dummy bump electrodes being arranged closer than
3 said plurality of first bump electrodes.

1 7. The semiconductor device as claimed in claim 1, wherein said
2 plurality of dummy bump electrodes being arranged between said
3 plurality of first bump electrodes and said plurality of said
4 chip electrodes.

1 8. The semiconductor device as claimed in claim 1, wherein said
2 plurality of dummy bump electrodes being provided for relaxation
3 of stress at mounting said semiconductor device.

1 9. The semiconductor device as claimed in claim 1, wherein said
2 plurality of dummy bump electrodes and said plurality of first
3 bump electrodes being arranged alternately along to
4 circumference of bump group.

1 10. A semiconductor device comprising:
2 a semiconductor substrate;
3 an insulating layer formed above said semiconductor
4 substrate;
5 a plurality of first bump electrodes formed on said insulating
6 layer, and each electrically connected to associated one of
7 plurality elements formed in said semiconductor substrate; and
8 a plurality of second bump electrodes formed on said insulating
9 layer, and each electrically connected to associated one of said
10 plurality of first bump electrodes.

1 11. The semiconductor device as claimed in claim 10, further

2 comprising:

3 a plurality of test pad formed on said insulating layer, and
4 each electrically connected to at least associated one of
5 plurality of first bump electrodes.